Curriculum Vitae (CV)

<table>
<tr><td>  </td><td>

Dr. Mazhar Hussain Prof. (Associate), GCUL (Pak) and Alexander von Humboldt Fellow (Germany)

Residence: Pakistan
Office Tele Phone No. 04299211637
Education: Pakistan, Hungary, Italy, Germany
Home address: 730, Neelam Block, Allama Iqbal Town, Lahore (Pakistan)
Office address: Department of Physics, GCU Lahore, Pakistan
Languages: English (Fluent), German (A1), Urdu (Fluent), Italian (Basic)
Phone No: 00923334492422

E-mail: dr.mazharhussain@gcu.edu.pk
ORCID: https://orcid.org/0000-0002-2712-2644

</td></tr>
<tr><td>Qualifications</td><td>Post-doctorate: (2017) University of Milan (Italy).
PhD (Physics): (2010) Government College University Lahore, Pakistan
Research work at Debrecen University, 2008-2009 Debrecen (Hungary).
M.Phil. (Physics): (2007) Government College University Lahore (Pakistan).
M.Sc. (2003) (Physics): Punjab University Lahore (Pakistan).
B.Sc.: (2000) Punjab University Lahore (Pakistan).
Matriculation (school certificate): (1995).</td></tr>
<tr><td>Experience and Skills</td><td>Senior Researcher, Alexander von Humboldt Fellow, Germany (2022 to date)
Associate Professor GCU-Lahore-(2018 to date).
M.Phil. Program Head- (2018-2022)
Group Leader- Nuclear Data Analysis Group (2012-2022)
Principle Investigator of an IAEA-CRP, Vienna, (Austria) (2012-2018).
Visiting Scientist: (INFN), Italy 2017.
Assistant Professor GCU-Lahore-(2011 to 2018).
Lecturer GCU-Lahore (2007-2010).
Research scientist at Debrecen University, Hungary (2008-2009).
(Skills: X-ray, Gamma Ray and Beta Spectroscopy. Computational Softwares. MIRDCal, TALYS, EMPIRE, ORIGIN Pro).</td></tr>
<tr><td>Memberships/Awards</td><td>Indigenous PhD Fellowship by HEC (2003).
International Research Support Initiative Program of Higher Education Commission (HEC), Government of Pakistan, (2008).
Accreditation of American Academy of Continuing Medical Education (AACME), Category-I. 2011.
Life Member Pakistan Physical Society (PPS).
Member Board of Faculty, GCU Lahore
Member Board of studies (Physics & IOP)
Alexander von Humboldt Fellowship, Germany
Member World Council on Isotopes (WCI)</td></tr>
</table>

Professional Training (International)

Course/ Diploma/ Certificate	Field of Study	Institution
Alexander von Humboldt Fellow (2022-2025)	Medical radionuclide production	INM-5, Forschungszentrum Julich, Germany
Joint ICTP-IAEA International School, 2021,2023	Physics	ICTP, Trieste, Italy
Technical Training, 2017	Medical Isotope Production	LASA, Milan and Pavia University, Pavia (Italy)
Workshop on the LHeC and FCC-eh, which will be held at CERN, 2017	Particle Physics	CERN, Geneva, Switzerland
Joint ICTP-IAEA workshop, 2017	Joint ICTP-IAEA workshop on the Evaluation of Nuclear Reaction Data for Medical Applications	The Abdus Salam International Centre for Theoretical Physics , (ICTP), Trieste, (Italy)
ICTP-IAEA workshop, 2013	ICTP-IAEA Joint workshop on Nuclear Data for Science Medical Applications	The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy
EMPIRE 3.0 (Model code training), 2008, 2013	Nuclear Model Calculation	International Atomic Energy Agency (IAEA), Vienna (Austria)
Training workshop, 2012, Joint ICTP-IAEA workshop, Theory and Evaluation IRSIP-HEC Program, 2008-2009	Medical Physics Evaluation of cross sections Medical Radioisotope Production	International Centre for Theoretical Physics, (ICTP), Trieste, (Italy) Debrecen University, Debrecen, (Hungary)

Professional Training (National)

Course/ Diploma/ Certificate	Field of Study	Institution
International School on Physics and Allied Disciplines (ISPAD 2021), March 9-11, 2021	Physics	NCP, Islamabad
International Symposium on Applications of Radioisotopes, (ISAR-18) November 22, 2018	Medical Physics	GCU Lahore
PPRA workshop, 2014	PPRA Rules, 2014	Government of Punjab, Lahore
38th International Nathiagali Summer College, 2013	Accelerators, Applications and New Accelerator Concepts	NCP, Islamabad and Nathiagali
39th International Nathiagali Summer College, 2014	Accelerator Technology and its Applications	NCP, Islamabad,
Work of The Ministerial Standing Committee on Science and Technological Cooperation, 2013 Workshop on Medical Radioisotopes, 2012	Radiotracers: Production Technology and Applications Production of Radioisotopes and their Applications in Medical Field	COMSTECH, Islamabad PINSTECH, Islamabad,
Workshop titled "Activities around Pelletron Accelerator", *2009* IBCAST, 2007	Accelerator Physics Science and Technology	CASP, Lahore CESAT, Islamabad

PhD Thesis Supervision

Sr. No.	Name of the Student	Thesis Title	Completion
1.	Nouman Amjad	Evaluation of production data of positron emitting radionuclide ^{55}Co and measurement of proton and deuteron induced reaction cross sections for ^{nat}Ni	2015
2.	Haleema Zaneb	Evaluation of nuclear reaction cross sections for the production of radioisotopes of Yttrium for medical applications	2017
3.	Waris Ali	Evaluation and Optimization Of Nuclear Reaction Cross Sections Relevant To The Production Of Emerging Diagnostic Radioisotopes Fe-52 And As-72	2019
4.	Muhammad Tashfeen Aslam	Compilation and evaluation of nuclear data regarding cross section for the production and clinical application of radioisotopes of Gallium	2021

Large collaborative International Research Project

Sr. No.	Title of the Project	Funding Agency	Organization
1.	Nuclear Data For Charged-particle Monitor Reactions	International Atomic Energy Agency (IAEA)	UNO

Total Number of Research Projects Completed: 52 (Each project resulted in the form a BS/MS/PhD thesis)

List of Publications

Sr. No.	Title of Research Paper	Name of Journal	Volume, Page No. & Year
1.	**M Hussain**, S Sudar, MN Aslam, HA Shah, R Ahmad, AA Malik, SM Qaim. **A comprehensive evaluation of charged particle data for production of the therapeutic radionuclide ^{103}Pd**.	Applied Radiation and Isotopes	67, 1842-1854, (2009).
2.	M Aslam, S Sudár, **M Hussain**, AA Malik, HA Shah, Syed M Qaim. **Charged particle induced reaction cross section data for production of the emerging medically important positron emitter ^{64}Cu; A comprehensive evaluation.**	Radiochim Acta	97, 669-686. (2009)
3.	**M Hussain**, S Sudár, MN Aslam, AA Malik, R Ahmad, Syed M Qaim. **Evaluation of charged particle induced reaction cross section data for production of the important therapeutic radionuclide Re-186.**	Radiochim Acta	98, 385-395, (2010)
4.	MN Aslam, S Sudár, **M Hussain**, AA Malik, HA Shah, SM Qaim. **Evaluation of excitation functions of proton and deuteron induced reactions on enriched tellurium isotopes with special relevance to the production of iodine-124.**	Applied Radiation and Isotopes	68, 1760-1773, (2010)
5.	**M. Hussain**. Study of excitation functions and evaluation of charged particle data for production of the therapeutic radionuclide ^{186}Re.	In: 9th Shaukat Khanum Memorial Symposium, proceedings.	P080, (2010)
6.	**M Hussain,** S Sudar, MN Aslam, R Ahmad, HA Shah, AA Malik, SM Qaim. **Comprehensive evaluations of charged particle data for production of the therapeutic radionuclides ^{103}Pd, ^{186}Re and ^{67}Cu.**	J. Korean Physical Society	59, 1987-1990, (2011)
7.	MN Aslam, S Sudár, **M Hussain**, AA Malik, SM Qaim. **Evaluation of excitation functions of ^{3}He and α-particle induced reactions on antimony isotopes with special relevance to the production of iodine-124**.	Applied Radiation and Isotopes	69, 94-104, (2011)
8.	MN Aslam, S Sudár, **M Hussain**, AA Malik, SM Qaim. **Evaluation of excitation functions of proton, ^{3}He and α-particle induced reactions for production of the medically interesting positron emitter bromine-76**	Applied Radiation and Isotopes	69, 1490-1505, (2011)

9.	**M. Hussain**. Validation of neutron induced data up to 18 MeV for production of the therapeutic radionuclide ^{67}Cu	EuCheMS 8th international conference on Nuclear and Radiochemistry (NRC8), ISBN 978-88-901562-4-3	ISBN 978-88-901562-4-3 (2012)
10.	M.K. Bakht, M. Bakhtiari, **M. Hussain**, M. Sadeghi,S.J. Ahmadi and C. Tenreiro. **Evaluation of the cyclotron-produced Praseodymium oxide radioactivity: Enhancement of the therapeutic properties of ^{142}Pr2O3 as a multifunctional agent. In BNMS-41st meeting**	Nuclear Medicine Communications	34, 36-411, 63 (2013)
11.	Balraj Singh, Daniel Abriola, Coral Baglin, Vivian Demetriou, Timothy Johnson, Elizabeth McCutchan, Gopal Mukherjee, Sukhjeet Singh, Alejandro Sonzogni,Jagdish Tuli , Pavel Blokhin, Yong Chen, Sansar Enkhbold, Oleksandr Gorbachenko, Maryam Hassanvand, Hanxiong Huang, **Mazhar Hussain**, Jasmeet Kaur, Gehan Khalil, Jeong Lee, Hai Nguyen, Monika Patial, Neha Sharma, Ariel Tarazaga, Natasa Todorovic, Jia Wang, Bo Yang. **Nuclear Data Sheets for A = 211**	Nuclear Data Sheets	114 (661-749), (2013)
12.	**M.Hussain**. Evaluation of Production Reactions for Medically Important Positron Emitters, in; INDC, International Nuclear Data Committee, Summary Report of the IAEA.	IAEA-INDC-NDS-630	INDC-NDS-630, 2013
13.	N Amjed, Ferenc Tárkányi, Alex Hermanne, Fenyvesy Ditroi, Sandor Takacs, **M Hussain**. **Activation cross sections of proton induced reactions on natural Ni up to 65 MeV.**	Applied Radiation and Isotopes	92 (73–84),(2014)
14.	LA Khan, N Amjed, **M Hussain. Evaluation of nuclear reaction cross sections for the production of an emerging diagnostic radionuclide ^{120}I via proton induced reactions on ^{120}Te and ^{120}Te.**	Journal of Natural Science and Mathematics PKISSN 0022-2941	54, 01-10 (2014).
15.	**M.Hussain**. Assessment of nuclear reaction cross section data, in; Nuclear Data for Charged particle Monitor Reactions and Medical Isotope Production, summary report of the IAEA.	IAEA-INDC(NDS)-675 (2015)	INDC(NDS)-675 (2015).
16.	H Zaneb, **M Hussain**, N Amjed, SM Qaim. **Nuclear model analysis of excitation functions of proton induced reactions on ^{86}Sr, ^{88}Sr and ^{nat}Zr: Evaluation of production routes of ^{86}Y.**	Applied Radiation and Isotopes	104 (232–241), (2015)

17.	N Amjed, **M Hussain**, MN Aslam, Ferenc Tárkányi, SM Qaim. **Evaluation of nuclear reaction cross sections for optimization of production of the emerging diagnostic radionuclide ^{55}Co.**	Applied Radiation and Isotopes	108, 38-48, (2016)
18.	H Zaneb, **M Hussain**, N Amjad, SM Qaim. **Evaluation of nuclear reaction cross section data for the production of ^{87}Y and ^{88}Y via proton, deuteron and alpha-particle induced transmutations.**	Applied Radiation and Isotopes	112, 69-79, (2016)
19.	Roberto Capote, Alan L Nichols, Francois Meiring Nortier, Brett V Carlson, Jonathan W Engle, Alex Hermanne, **Mazhar Hussain**, Anatoly V Ignatyuk, Mark A Kellett, Tibor Kibédi, Guinyun Kim, Filip G Kondev, Ondrej Lebeda, Aurelian Luca, Haladhara Naik, Yasuki Nagai, Ingo Spahn, Saraswatula V Suryanarayana, Ferenc T Tárkányi, Marco Verpelli. **IAEA coordinated research project on nuclear data for charged-particle monitor reactions and medical isotope production.**	EPJ Web of Conferences eISSN: 2100-014X	146, 08007, (2017).
20.	S Manenti, **M Hussain**, F Groppi. **Experimental excitation functions of 89Zr production by deuteron irradiations for theragnostic applications.**	INCC-2017 (Gothenberg conference)	Sttore FIS/07-2017
21.	Andleeb Masood, Khalid Masood, **Mazhar Hussain**, Waqar Ali, Masooma Riaz, Zafar Alauddin, Munir Ahmad, Misbah Masood, Abubaker Shahid. **Thirty Years Cancer Incidence Data for Lahore, Pakistan: Trends and Patterns 1984-2014.**	Asian Pacific Journal of Cancer Prevention	19 (3), 709–717, (2018).
22.	Yusuf Musa Ahijjo, AN Baba-Kutigi, M Momoh, AM Bayawa, **M Hussain. An Awareness Survey of Inhabitants Exposure to Radiological Impacts on Mines in Yauri LGA, Kebbi State, Nigeria.**	European Journal of Engineering and Technology Research. ISSN: 2736-576X	Vol. 3, No. 11, 1215, (2018).
23.	Y M Ahijjo, A N Baba-Kutigi, M Momoh, A M Bayawa, **M Hussain. Radioactivity concentrations in soil samples from Kandam, Gyalgyal, Burmavan masaka, Dinbisu and Giyawa mines in Wurno LGA, Sokoto State Nigeria.**	Asian Journal of Research and Reviews in Physics. ISSN: 2582-5992	1 (4), 1-9, (2018)
24.	Alex Hermanne, Anatoly V Ignatyuk, Roberto Capote, Brett Vern Carlson, Jonathan W Engle, Mark A Kellett, Tibor Kibedi, Guinyun Kim, Filip G Kondev, **Mazhar Hussain**, Ondřej Lebeda, A Luca, Y Nagai, H Naik, Austin Lee Nichols, FM Nortier, Saraswatula V Suryanarayana, S Takács, FT Tárkányi, Marco Verpelli. **Reference Cross Sections for Charged-particle Monitor Reactions**	Nuclear Data Sheets	148, 338–382, (2018).

25.	FT Tárkányi, AV Ignatyuk, Alex Hermanne, Roberto Capote, BV Carlson, Jonathan W Engle, Mark A Kellett, Tibor Kibedi, GN Kim, FG Kondev, **M Hussain,** O Lebeda, A Luca, Yasuski Nagai, H Naik, AL Nichols, FM Nortier, Saraswatula V Suryanarayana, S Takács, Marco Verpelli. **Recommended nuclear data for medical isotope production: diagnostic gamma emitters.**	J. Radio. Nucl. Chem.	319, Issue 2, 487–531, (2019).
26.	W Ali, M Tashfeen, **M Hussain. Evaluation of nuclear reaction cross sections via proton induced reactions on ^{55}Mn for the production of ^{52}Fe: a potential candidate for theranostic applications.**	Applied Radiation and Isotopes	144, 124-129, (2019).
27.	J.W. Engle, A. V. Ignatyuk,R. Capote, B. V. Carlson, A. Hermanne, M. A. Kellett, T. Kib´edi, G. Kim, F. G. Kondev, **M. Hussain**, O. Lebeda, A. Luca, Y. Nagai, H. Naik, A. L. Nichols, F. M. Nortier, S. V. Suryanarayana, S. Tak´acs, F. T. T´ark´anyi and M. Verpelli. **Recommended Nuclear Data for the Production of Selected Therapeutic Radionuclides.**	Nuclear Data Sheets	155, 56–74, (2019).
28.	FT Tárkányi, AV Ignatyuk, Alex Hermanne, R Capote, BV Carlson, Jonathan W Engle, Mark A Kellett, Tibor Kibedi, GN Kim, FG Kondev, **M Hussain**, O Lebeda, A Luca, Yasuski Nagai, H Naik, AL Nichols, FM Nortier, Saraswatula V Suryanarayana, Sandor Takacs, Marco Verpelli. **Recommended nuclear data for medical radioisotope production: diagnostic positron emitters.**	J. Radio. Nucl. Chem.	319, Issue 2, 533–666, (2019).
29.	N.Amjed, A.M.Wajid, N.Ahmad, M.Ishaq, M.N.Aslam, **M.Hussain**, S.M. Qaim. **Evaluation of nuclear reaction cross sections for optimization of production of the important nonstandard positron emitting radionuclide ^{89}Zr using proton and deuteron induced reactions on ^{89}Y target**	Applied Radiation and Isotopes	165, 109338, 2020).
30.	W Ali, **M Hussain**, N Amjad. **Evaluation of nuclear reaction cross sections via proton induced reactions on ^{72}Ge and ^{76}Se to produce ^{72}As: A potential entrant for the theranostic pairs.**	Applied Radiation and Isotopes	168, 109507, 2021).
31.	Muhammad Tashfeen Aslam, Waris Ali**, Mazhar Hussain. Nuclear model analysis of the ^{65}Cu(α,n)^{68}Ga reaction for the production of ^{68}Ga up to 40 MeV.**	Applied Radiation and Isotopes	170, 109590, 2021).
32.	Muhammad Tashfeen Aslam, **Mazhar Hussain. Calculations for the nuclear reaction cross-sections via α-particle induced reactions on ^{65}Cu to produce impurity free Ga-67 for medical application**	Applied Radiation and Isotopes	172, 109678, 2021

33.	Nouman Amjed, M Naveed Aslam, **Mazhar Hussain**, Syed M Qaim. **Evaluation of nuclear reaction cross section data of proton and deuteron induced reactions on ^{75}As, with particular emphasis on the production of ^{73}Se.**	Radiochim Acta	109, no. 7, 525537, (2021,).
34.	Syed M Qaim, **Mazhar Hussain,** Ingo Spahn, Bernd Neumaier. **Continuing, Nuclear Data Research for Production of Accelerator-Based Novel Radionuclides for Medical Use: A Mini-Review.**	Frontiers in Physics	9, 639290, (2021)
35.	W Ali, M Zeeshan, **M Hussain**, H Zaneb. **Evaluation of nuclear reaction cross sections data for the production of ^{65}Zn via proton and deuteron induced reactions on ^{nat}Cu.**	J. Radio. Nucl. Chem.	330, Issue 1, 4755, (2021).
36.	**Mazhar Hussain**, Waris Ali, Nouman Amjed, Abdul M Wajid, Muhammad N Aslam. **An overview of nuclear data standardisation work for accelerator-based production of medical radionuclides in Pakistan**.	Radiochim Acta	110, Issue 6-9, 645-662, (2022)
37.	Nouman Amjed, Ahmad Naz, Abdul Muneeb Wajid, **Mazhar Hussain,** Syed Muhammad Qaim. **Evaluation of cross section data for the low and medium energy cyclotron production of the non-standard positron emitting radionuclide ^{90}Nb.**	Radiation Physics and Chemistry	209, 110996, (2023)
38.	**Mazhar Hussain,** Syed M Qaim, Ingo Spahn, M Naveed Aslam, Bernd Neumaier. **Copper Radionuclides for Theranostic Applications: Towards Standardisation of their Nuclear Data. A Mini-Review.**	Frontiers in Chemistry	11, 1270351, (2023)
39.	Bilal Javed Mughal, Sohaib Hassan, Muhammad Uzair Aslam, Muzaffar Bashir, Saman Shahid, **Mazhar Hussain**, Marian Siwiak, Zafar Yasin. **Modeling and simulation for the second wave of COVID-19 in Pakistan**	Res. Biomed. Eng	40, 139–164, (2024).
40.	**Mazhar Hussain,** Lucas Mues Genannt Koers, Ingo Spahn, Stefan Spellerberg, Bernd Neumaier, Syed M Qaim, **Excitation functions of ^{72}Ge(p,xn)^{72,71As} reactions from threshold up to 45 MeV for production of non-standard positron emitter ^{72}As**	Nature scientific reports	14, 16724, (2024)
41.	**Mazhar Hussain**, Koers, Lucas Mues genannt, Spahn, Ingo, Spellerberg, Stefan, Neumaier, Bernd and Qaim, Syed M. **Positron emission intensity in the decay of ^{72}As for use in PET studies.**	Radiochimica Acta	113, 601-609 (2025)

42.	Shuza M. Uddin, Ingo Spahn, M. Shamsuzzoha Basunia, Andrew S. Voyles, Stefan Spellerberg, **Mazhar Hussain** Sándor Sudár, Lee A. Bernstein, Bernd Neumaier, Syed M. Qaim**. An overview of production routes of the non-standard positron emitter ^{86g}Y with emphasis on a comparative analysis of the ^{86}Sr(p,n)- and ^{86}Sr(d,2n)-reactions**	Radiochimica Acta	113, 345-351 (2025)
43.	Andreas Dragoun, Ingo Spahn, **Mazhar Hussain, E**rik Strub, Bernd Neumaier, Johannes Ermert. **Cross-section measurements of the ^{93}Nb(p,n)^{93m}Mo reaction up to 17 MeV.**	J Radioanal Nucl Chem	334, 5149–5154 (2025)
44.	Martinsen, Elise Malmer, Voyles, Andrew S., Wei Li, Kevin Ching, Basunia, M. Shamsuzzoha, Bernstein, Lee A., Okstad Ekeberg, Hannah Lovise, **Hussain Mazhar,** Morrell, Jonathan T., Qaim, Syed M., Siem, Sunniva, Uddin, Md. Shuza and Zaneb, Haleema. **Deuteron-induced reactions on natural Zr from threshold to 50 MeV: production of ^{86g}Y**.	Radiochimica Acta	Accepted (2025)
45.	M. Eman, N. Amjed, A. Naz, A.M. Wajid, Samar, **M. Hussain**, S.M. Qaim**, Evaluation of excitation functions of 127I(p,xn) 121,122, 123, 125,127Xe reactions, with particular reference to the production of 127Xe and 123I for medical use.**	Radiation Physics and Chemistry	226, 112331, (2025)
46.	A.M. Wajid, N. Amjed, A. Naz, **M. Hussain**, M.N. Aslam, **Evaluation of nuclear reaction cross section for the production of the emerging positron emitter radionuclide 73Se.**	Radiation Physics and Chemistry	240, 113465, (2026)

Selected Research and Academic Presentations/Seminars

Sr. No.	Title of the Talk	Host Organization	Date
1.	Technical Talk: *Evaluation of medically important radionuclides*, Joint IAEA-ICTP Workshop on Nuclear Structure and decay data: Theory and evaluation.	ICTP, Trieste, Italy,	06-17, August, 2012

2.	Research proposal speech: "*Evaluation of Nuclear Reactions for the Production of Medically Important Positron Emitters"*, INDC, International Nuclear Data Committee, Summary Report, First Research Coordination Meeting on Nuclear Data for Charged Particle Monitor Reactions and Medical Isotope Production,	IAEA Headquarters, Vienna, Austria	3–7 December 2012
3.	Technical Talk: *Comprehensive evaluation of therapeutic radioisotopes*, at 38th International Nathia Gali Summer College, NCP (Islamabad) and Nathia Gali,	National Center for Physics (NCP), Islamabad	24-06-2013 to 05-07-2013,
4.	Presented the paper on "*Evaluation of nuclear reaction cross section data for the production of $_{55}Co$"*, Workshop on Nuclear Data for Science and Technology, Medical Applications,	ICTP, Trieste, Italy.	30-09-2013 to 04-10-2013
5.	Presented the paper on "*Evaluation of proton induced nuclear reaction cross section data for the production of $_{67}Cu$",* Workshop on Radiotracers	COMSTECH, Constitution Avenue, Islamabad, Pakistan.	21 to 23 October 2013,
6.	Technical Speech on *"Assessment of nuclear reaction cross section data",* in, Nuclear Data for Charged-particle Monitor Reactions and Medical Isotope Production,	IAEA, Headquarters in Vienna, Austria,	8-12-December 2014
7.	Invited Lecture on *"Research activities around LASA, INFN, Milano"*, 13-03-2017 at LASA (INFN), Milan (Italy).	*LASA, INFN*, Milan (Italy).	13-03-2017
8.	An oral presentation with title, *Experimental excitation functions of $_{89}Zr$ production by deuteron irradiations for theranostic applications*, in the 5th INCC at Gothenburg, Sweden.	Chalmers University, Gothenburg, Sweden	27-08-2017 to 01-09-2017

9.	Invited lecture on, "*Standardization of nuclear reaction cross sections for the production of Medical Radionuclides"* at Jülich Research Centre, Jülich, Germany.	Research Centre, Jülich, Germany	25-09-2017
10.	Lecture on, *Standardization of nuclear data for the production of medical radionuclides* at the Joint ICTP-IAEA Workshop on the Evaluation of Nuclear Reaction data for Applications	ICTP, Trieste, Italy	October, 02-13, 2017
11.	"Nuclear Science at the service of mankind" in 2nd International Conference on Education Science beyond Classroom	University of Education Lahore	March 15-17, 2018
12.	Invited Speaker: "Global Energy Demand and Supply and Role of Nuclear Energy" in 6th International Conference on Emerging Trends on Material Science and Technology	Lahore Garrison University, Lahore	April 5-6, 2021
13.	Oral Presentation in RANC23, 3rd International Conference on Radioanalytical and Nuclear Chemistry	Budapest, Hungary	May 7-12, 2023
14.	Lecture on, TALYS Golbal parameters and TENDL *data for the production of medical radionuclides* at the Joint ICTP-IAEA Workshop on TALYS.	ICTP, Trieste, Italy	October, 16-20, 2023
15.	Standardisation of nuclear reaction cross section data for production of medical radionuclides	Forschungszentrum, Jülich, Germany	August, 22-25, 2024

International Travel Grants

Sr. No.	Purpose of Grant	Funding Agency	Date
1.	Bench Work of PhD (Hungary)	HEC (Pakistan)	2008-2009
2.	EMPIRE, Nuclear Model Code Training (Austria).	International Atomic Energy Agency (IAEA), Vienna, Austria	2008

3.	Joint IAEA-ICTP Workshop on Nuclear Structure and decay data: Theory and evaluation.	ICTP, Trieste, Italy	2012
4.	First Research Coordination Meeting on Nuclear Data for Charged Particle Monitor Reactions and Medical Isotope Production	International Atomic Energy Agency (IAEA), Vienna, Austria	2012
5.	Workshop on EMPIRE, Nuclear Model Code for transport calculations, 2-6 December, 2013.	International Atomic Energy Agency (IAEA), Vienna, Austria	2013
6.	Workshop on Nuclear Data for Science and Technology, Medical Applications,	ICTP, Trieste, Italy	2013
7.	Scientific Visit of Jülich Research Centre, Jülich, Germany	Jülich Research Centre, Jülich, Germany	2017
8.	Workshop on the LHeC and FCC-eh, held at CERN	CERN, INFN (LASA), Italy	2017
9.	Joint ICTP-IAEA Workshop on the Evaluation of Nuclear Data	UNO-IAEA-ICTP	2017
10.	Joint ICTP-IAEA Workshop on TALYS	UNO-IAEA-ICTP	2023

Role in Institutional Development

Sr. No.	Nature of Assignment	Duration
1.	Member Board of Faculty of Mathematical and Physical Sciences, GCU Lahore	2018 to date
2.	Member Board of Studies of Physics, GCUL	2011 to date
3.	Member Board of Studies of IOP, GCUL	2018 to date
4.	Member Technical Committee, Physics, GCUL	2011 to date
5.	Coordinator M.Phil. Program, GCUL	2015 to 2017, 2019-2022
6.	Advisor Jones Physics, Society (JPS)	2015-2017, 2019-2022
7.	Coordinator- CERN Delegates at GCU	2018-2022, 2025

Conference/ Workshops Member Organizing/technical Committees

Sr. No.	Name of Conference / Workshop	Duration
1.	ICPCN-14, Member Organizing Committee, GCU Lahore	Nov. 19-21, 2014
2.	International Symposium on Applications of Radioisotopes, (ISAR-18), GCU Lahore	Nov. 22, 2018
3.	5th International Conference on "Theoretical and Experimental Studies in Nuclear Applications and Technology", TESNAT 2019, Amasya University, Amasya, Turkey, Member Technical Committee	May, 02-04, 2019
4.	16th National Symposium on frontiers in Physics, GCU, Lahore	JANUARY 29-31, 2019
5.	12th International Conference on Applied Physics and Mathematics (ICAPM2022), Singapore, Member TPC Board	Feb. 18-20, 2022
6.	Coordinator CERN-GCU Task Force Meeting in Pakistan	2022
7.	Coordinator CERN-GCU Task Force Meeting in Pakistan	2025

Community Services

Sr. No.	Detail of Service	Duration
1.	Secretary The Pakistan Physical Society (PPS)	2021 to 2022
2.	Advisor Jones Physics, Society (JPS)	2014 to 2022
3.	Member Technical, TESNAT 2019, Turkey	2019
4.	Member Curriculum, PHEC, Govt. of Punjab	2020 to 2022
5.	Coordinator CERN-PAEC-GCU research collaboration	2015 to 2022
6.	Review Editor, Frontiers in Physics (Nuclear Physics)	Since, 2023
7.	Member TPC, (ICAPM), Singapore	2021,2022, 2023
8.	Member World Council of Isotopes (WCI)	Life Member

List and contact details of references

1. Prof. Dr. Dr. h.c. (mult.) S.M. Qaim

   Advisor

   INM-5, Forschungszentrum Jülich (Germany)

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   Tel. 00492461613282

2. Dr. Gohar Abbas

   Associate Professor of Physics

   Government College University, Lahore (Pakistan)

   E-mail: gohar.abbas@gcu.edu.pk

   Tel. 00923334303912

3. Dr. Ingo Spahn

   Head Cyclotron

   Forschungszentrum Jülich, Germany

   E-mail: i.spahn@fz-juelich.de